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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/802,933

03/18/2004

Masaki Toyokura

2004_0444A

5157

513

7590

09/27/2006

WENDEROTH, LIND & PONACK, L.L.P.

2033 K STREET N. W.

SUITE 800

WASHINGTON, DC 20006-1021

EXAMINER

DANG, KHANH

ART UNIT

PAPER NUMBER

2111

DATE MAILED: 09/27/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/802,933	Applicant(s) TOYOKURA, MASAKI	
	Examiner Khanh Dang	Art Unit 2111	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date ____ | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Drawings

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the so-called "processing level judging means" (claims 1 and 3) must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

Claims 1-7 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1 and 4 are directed to an apparatus. However, the essential structural cooperative relationship(s) between the so-called “access cycle counter,” “processing means,” “correspondence information,” “processing level judging means” have been omitted, such omission amounting to a gap between the necessary structural connections. See MPEP § 2172.01.

Claims 2, 4, and 5 are directed to an apparatus. However, the essential structural cooperative relationship(s) between the so-called “access cycle counter,” “processing means,” “correspondence information,” “arbiter,” “processing level judging means” have been omitted, such omission amounting to a gap between the necessary structural connections. See MPEP § 2172.01.

Claims 3, 5, and 6 are directed to an apparatus. However, the essential structural cooperative relationship(s) between the so-called “access cycle counter,” “processing means,” “correspondence information,” “arbiter,” “processing level judging means” have been omitted, such omission amounting to a gap between the necessary structural connections. See MPEP § 2172.01.

MPEP 2172.01 requires that relationships between elements recited in the claims must be specified. Specifically, MPEP 2172.02 requires interrelation and structural relationships between essential elements in the claims. Therefore, it is the Examiner's

position that the claimed elements, as defined in the originally filed specification and as identified above, are essential elements to the claimed invention. Since they are essential elements as defined in the originally filed specification, their structural cooperative relationships must be provided in the claims. Further, it is also the Examiner's position that the claimed elements, as identified above, function simultaneously, are directly functionally related, directly inter-cooperate, and/or serve independent purposes, as evidenced from the originally filed specification.

If Applicants disagree with the Examiner that the above identified elements, as defined by the originally filed specification, are essential elements to the claimed invention, and that the above identified elements are directly functionally related, directly inter-cooperate, and/or serve independent purposes, it is requested that Applicants provide evidences showing that the identified elements are not essential elements to the claimed invention, do not function simultaneously, are not directly functionally related, do not directly inter-cooperate, and/or do not serve independent purposes; and state on the record that this is the case.

Further, with regard to claims 1 , 3, 4, and 6, it is unclear what may be a difference between the so-called "processing level judging means" and the "arbiter. As disclosed by the originally filed specification, page 20, "the bus controller according to the first embodiment includes the access cycle counter 12, the arbiter 11 as a processing means for performing processing of different levels that varies with requesters, and the correspondence information 13 that shows correspondences between the processing level that varies with requesters and the number of access

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cycles. Further, the arbiter ii arbitrates access permission for access requests from plural requesters, and also functions as a processing level judging means that indicates the processing level." As claimed, the "processing level judging means" and the "arbiter" are separate and different structure.

Allowable Subject Matter

Claims 1-7 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Statement of reasons for the indication of allowable subject matter

The following is a statement of reasons for the indication of allowable subject matter:

The prior art of record does not disclose or suggest the features: "a processing level judging means for indicating a processing level of the processing performed by the processing means of the respective requesters for which an access permission is given; and said processing level judging means indicating the processing levels of the respective requesters for which an access permission is given, in accordance with a present cycle number that is counted by the access cycle counter, the number of remaining cycles up to a predetermined limit cycle number, and the correspondence information showing the correspondences between the processing levels of the respective requesters and the access cycle numbers" (claim 1); "said arbiter performing

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a control for giving no permission to a non-realtime bus access request when it is expected that a total number of cycles of all the requesters would exceed the limit cycle number in accordance with a present cycle number that is counted by the access cycle counter, the number of remaining cycles up to a predetermined limit cycle number, and the correspondence information that shows correspondences between the plural requesters and the access cycle numbers" (claim 2); and "said processing level judging means and said arbiter indicating the levels of the processings which are performed by the processing means of the respective requesters for which an access permission is given, in accordance with a present cycle number counted by the access cycle counter, the number of remaining cycles up to a predetermined limit cycle number, and the correspondence information, and performing a control for giving no permission to a non-realtime bus access request when it is expected that a total number of cycles of all requesters would exceed the limit cycle number" (claim 3).

Relevant Art

US Patent Nos. 6,820,152 to Kanzaki et al., 5,241,632 to O'Connell et al., 6,055,577 to Lee et al., 6,138,200 to Ogilvie, 6,425,032 to Prasana, 5,784,569 to Miller et al., 6,658,511 to Yamada et al., 5,956,493 to Hewitt et al., 5,533,205 to Blackledge, Jr. et al., 6,178,475 to O'Brien, and 6,058,450 to LaBerge are cited as relevant art.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Khanh Dang whose telephone number is 571-272-3626. The examiner can normally be reached on Monday-Friday from 9:AM to 5:PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Rinehart, can be reached on 571-272-3632. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Khanh Dang
Primary Examiner